



Executive summary of the public audit report

ASSESSMENT OF THE STUDIES AND SCIENCE DEVELOPMENT PROGRAMME CARRIED OUT BY THE MINISTRY OF EDUCATION AND SCIENCE

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DEFINITIONS AND ABBREVIATIONS

MES: the Ministry of Education and Science

GRL: Government of the Republic of Lithuania

RED: Research and Experimental Development

ASIT (MITA): Agency for Science, Innovation and Technology

RHEMAC (MOSTA): Research and Higher Education Monitoring and Analysis Centre

OECD (EBPO): Organisation for Economic Co-operation and Development

CITE (ITC): Centre of Information Technologies in Education

RCL (LMT): Research Council of Lithuania

LIC: Lithuanian Innovation Centre

LAS (LMA): Lithuanian Academy of Sciences

H2020: Horizontas 2020

Programme: the Studies and Science Development Programme

Smart specialization: the State strategy to support research and innovation. By developing such strategy, Lithuania, like other countries of the European Union, established its own research, experimental development (RED) and innovation priorities, taking into account the existing or potential competitive advantages¹.

Priority RED and innovation direction: the economic area, in which the country has a sufficient scientific and business potential, is capable of responding to global and national challenges emerging in this area and seizing the opportunities that can lead to significant positive changes².

Horizontas 2020: a continuous EU research and innovation program with 2014-2020 budget of approximately 80 billion euros. The program was designed to increase Europe's global competitiveness; therefore, it focuses not so much on research and technological development, but rather on scientific advances, which could become new products and services that generate business opportunities and improve people's lives. The applicants of this program may include academic institutions and business enterprises as well as other institutions³.

Research and experimental development: systematic creative cognitive activities in such areas as nature, humanity, culture and society, and use of their results⁴.

¹ Accessed via: <http://sumani2020.lt/apie-sumania-speciaizacija/apie> [Accessed on 22/08/2016].

² Accessed via: https://www.smm.lt/web/lt/mokslas/sumani_spec [Accessed on 22/08/2016].

³ Accessed via: www.h2020.lt [Accessed on 16/06/2016].

⁴ Law on Science and Studies of the Republic of Lithuania No. XI-242, 30/04/2009, Art. 4, p. 11.

SUMMARY

Targeted science development, implementation of common scientific and business ideas, and international relations may contribute significantly to the strengthening of economic development and ensuring the country's competitiveness. Implementing the country's strategic objectives, the Ministry of Education and Science lays down the rules for the research system management and financing, monitors, analyzes and assesses research results, and submits offers for the research system improvement to the authority that shapes the national policy, i.e. the Seimas. Other institutions, such as the Research Council of Lithuania, research and education institutions, the Ministry of Agriculture, and others, are also involved in the shaping and implementation of the RED policy. The Ministry of Education and Science implements the RED policy in the public sector; the Ministry of Economy implements this policy in the business sector.

The state of Lithuanian science is poor, compared to that of other countries of the European Union: the business sector's investment in RED is among the lowest in the EU, although the amount of business RED funds released through the public sector is among the largest in the EU. The success rate for participation in the H2020 programme is only 10 percent, and Lithuania is second last (of 28 countries of the EU) according to the amount of the grant received (17 million euros). No favourable science and research environment was created in Lithuania to secure the country's attractiveness to the top-level scientists and researchers. No doctoral students are invited from abroad. The current RED funding scheme does not ensure the stability and continuity of researches⁵.

The objective of the continuous Studies and Science Development Programme implemented by the Ministry is implementation of the country's strategic goals, promotion of common scientific and business relations and participation in international activities. Compared to the overall State budget funds allocated to the RED institutions in the public sector, the RED part of this programme consists of approximately 2-3% of the funds. However, when implementing the programme, the Ministry should contribute to the targeted implementation of the State's goals.

We assessed whether the programme measures in the research field were implemented efficiently and help to achieve the established objectives. We analysed whether the objectives, measures and assessment criteria of the programme allow to achieve and measure the goals of the programme, whether directions and priorities established by the State were being implemented when implementing the programme (17 million euros were allocated to the development of science), whether cooperation between science and business was promoted by supporting the RED projects, and whether all of the previously mentioned gave the planned outcome (positive effects). We also examined whether the programme funds were adequately used to promote participation of scientists, science and education institutions in international activities, and how the research system monitoring was carried out.

We formulated the audit conclusions after examining the country's strategic documents, evaluation reports from foreign experts, 2015–2017 Strategic Action Plan of the Ministry of Education and Science, the 2015 performance reports of the Ministry and establishments

⁵ RHEMAC. Overview of the state of Lithuanian science, 2015.

subordinate thereto, Articles of Association, orders and documents of institutions, related to the tender funding of the RED programme, etc.

To the executive bodies of the programme, i.e. the Ministry of Education and Science and its subordinate establishments: Both the Agency for Science, Innovation and Technology (ASIT) that administered the RED projects and the Research and Higher Education Monitoring and Analysis Centre (RHEMAC) that carried out scientific monitoring were lacking stronger actions to deal with the scientific management and funding problems. We gained insight into the problems faced by employees of academic institutions, scientists and business representatives. For years now, both the Organisation for Economic Co-operation and Development and the European Commission have been indicating systemic shortcomings in their reports and recommendations.

The programme prepared by the Ministry of Education and Science made it possible to properly implement it, with the exception of certain observations. The national budget funds allocated to the programme for 2015 were used to finance researches with unclear priorities and unassessed impact. Part of the funds allocated to support cooperation between business and science and education institutions is not used purposefully. In addition, this audit revealed certain systemic shortcomings: no uniform system was created for solving the State problems related to emergency scientific researches, scientific monitoring and promotion of successful participation of education institutions in the Horizontas 2020 programme.

CONCLUSIONS

1. For a part of the RED projects funded by the national budget (1,699.6 thousand euros) through the Agency for Science, Innovation and Technology, the Ministry failed to establish clear priority orientations, so that investments could be allocated to the projects with the highest potential (Subsection 1.1).
2. no uniform system was created that would allow ministries and other interested public institutions to initiate scientific researches in accordance with the urgent needs of the State (State commissions). As a result, it remains unclear whether the State's most important issues are being addressed (Subsection 1.2).
3. The impact of the RED projects funded through the Agency for Science, Innovation and Technology was not assessed; therefore, there are no preconditions for assessing the purposefulness of various activities (Subsection 1.3).
4. Research and education institutions fail to use 42 percent (718.6 thousand euros) of promotion funds allocated to business RED orders. Therefore, such funds are redistributed as additional basic funding of long-term institutional RED programmes in accordance with the established procedure. However, such actions do nothing to promote cooperation between research and education institutions and business. The programme tool designed to support joint research and business projects was not used for two years and its funds (289.6 thousand euros) were used for other activities (Subsection 2.1).
5. Some of the assessment criteria of the programme do not allow proper assessment of activities related to promotion of inter-institutional, inter-sectoral and international cooperation while carrying out researches. Thus, there are no preconditions for improving performance on the basis of reliable data (Subsection 2.2).

6. The research monitoring system is not being coordinated sufficiently. Various surveys are carried out to assess the research system, during which recommendations concerning performance improvement are provided. Unfortunately, the main institution that carries out scientific monitoring, i.e. the Research and Higher Education Monitoring and Analysis Centre, is not monitoring, how these recommendations are being taken into account (Section 3).
7. Not all opportunities were used to promote participation of science and education institutions and researchers in the Horizontas 2020 programme. As a result, no additional investments were attracted to RED (Section 4).

RECOMMENDATIONS

Properly implementing the presented recommendations, the Ministry will be able to make more grounded management decisions, ensure more purposeful use of the money allocated to the RED funding, attract more business and foreign investments to RED, and prepare for 2020, when research funding by the EU structural funds may be cut off. Therefore, we recommend:

1. [Creating a uniform system for the RED initiation and execution of State commissions together with the institutions concerned \(Conclusion 2\).](#)

Actions and resources of the interested institutions should be connected and coordinated when addressing relevant national issues requiring urgent research results. This system should include the Ministry of Education and Science, the Research Council of Lithuania and other ministries, as well as the Government that could provide an opinion on whether the problem is strategically important and relevant to the State, and requires urgent solution.

2. [Assessing the impact of the RED projects funded through the Agency for Science, Innovation and Technology \(Conclusion 3\).](#)

Not only the impact of projects of Eureka and Eurostars programmes, but also the benefits of other project activities should be assessed. In order to obtain the necessary information, the executive bodies could be obliged to provide specific data, etc. during the assessment period.

3. [Adjusting the science and education institution funding system so that allocated funds could be directed to joint activities of science and education institutions and business \(Conclusions 1 and 4\).](#)

When adjusting the funding system, pay attention to the part of the funds, which has been reallocated to research and education institutions as additional basic funding for several years. Also, negotiations with the Ministry of Finance regarding the Ministry's measures designed to promote the creation of science-intensive business should be resumed.

Although the Ministry of Education and Science submitted the new measures as early as October 2014, their coordination process has taken too long. We will notify the Ministry of Finance about it.

4. [Adjusting the assessment criteria for the programme \(Conclusion 5\).](#)

Values of the assessment criteria should be adjusted; technical annexes should be drawn for the assessment criteria.

5. [Taking the initiative to ensure efficient cooperation of the institutions carrying out scientific monitoring as well as monitoring of recommendations of the field of science \(Conclusion 6\).](#)

To confirm the scientific monitoring indicators, coordinate the data and information exchange opportunities between the establishments carrying out monitoring. RHEMAC should monitor the implementation of its recommendations.

Since from 1 January 2017 the legal status of RHEMAC will change to that of public establishment, and rights and obligations of its owner will be implemented by the Office of the Government, the Ministry will not be able to properly implement the recommendations. We will notify the Government about that.

6. Executing the measures for promoting the Horizontas 2020 programme (Conclusion 7).

In order to decide whether the planned promotion measures are sufficient and will help to purposefully contribute to a more successful participation in the programme, coordinate them with the authorities contributing to participation in the programme, and begin implementing them within the specified deadline.

Measures and time frames for the implementation of the recommendations for the Ministry of Education and Science are presented in Annex 1, 'Plan for Implementing Recommendations'.

Similar problems were discovered after the completion of the audit of the Country's Studies and Science Development Programme of the Research Council of Lithuania. As a result, when implementing certain recommendations, the Ministry will have to work closely with the Research Council of Lithuania. In addition, a more detailed analysis of the RED system was performed while conducting the public 'Public Investment in Research and Experimental Development to Increase Innovation and State Competitiveness' audit, which includes activities of the Ministry of Economy, the Ministry of Education and Science, and science and education institutions in the RED field.

Please also note that after the adoption of amendments to the Law on Science and Studies in 2016, RHEMAC, a subordinate of the Ministry of Education and Science, which implemented the audited programme together with the Ministry in 2015, will become a subordinate of the Government. Therefore, in order to ensure continuity of the research policy shaping and implementation process, the Ministry will have to adjust the activities carried out and work closely with the mentioned institution.